

RAW SEQUENCE LISTING
PATENT APPLICATION US/08/167,628DATE: 02/16/94
TIME: 13:53:25

INPUT SET: S866.raw

SEQUENCE LISTING

(1) General Information:

(i) APPLICANT: Grotendorst, Gary R.
Bradham Jr., Douglas M.,

(ii) TITLE OF INVENTION: CONNECTIVE TISSUE GROWTH FACTOR

(iii) NUMBER OF SEQUENCES: 2

(iv) CORRESPONDENCE ADDRESS:

(A) ADDRESSEE: Spensley Horn Jubas & Lubitz
(B) STREET: 4225 Executive Square, Suite 1400
(C) CITY: La Jolla
(D) STATE: CA
(E) COUNTRY: US
(F) ZIP: 92037

(v) COMPUTER READABLE FORM:

(A) MEDIUM TYPE: Floppy disk
(B) COMPUTER: IBM PC compatible
(C) OPERATING SYSTEM: PC-DOS/MS-DOS
(D) SOFTWARE: PatentIn Release #1.0, Version #1.25

(vi) CURRENT APPLICATION DATA:

(A) APPLICATION NUMBER: US/08/167,628
(B) FILING DATE:
(C) CLASSIFICATION:

(vii) PRIOR APPLICATION DATA:

(A) APPLICATION NUMBER: US/07/752,427
(B) FILING DATE:

(viii) ATTORNEY/AGENT INFORMATION:

(A) NAME: Wetherell, Jr. Ph.D., John W.
(B) REGISTRATION NUMBER: 31,678
(C) REFERENCE/DOCKET NUMBER: PD-1294

(ix) TELECOMMUNICATION INFORMATION:

(A) TELEPHONE: 619-455-5100
(B) TELEFAX: 619-455-5110

(2) INFORMATION FOR SEQ ID NO:1:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 2075 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

ENTERED

RAW SEQUENCE LISTING
PATENT APPLICATION US/08/167,628DATE: 02/16/94
TIME: 13:53:36

INPUT SET: S866.raw

52
53 (ii) MOLECULE TYPE: cDNA
54
55
56 (vii) IMMEDIATE SOURCE:
57 (B) CLONE: DB60R32
58
59 (ix) FEATURE:
60 (A) NAME/KEY: CDS
61 (B) LOCATION: 130..1177
62
63
64 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:1:
65
66 CCCGCCGAC AGCCCCGAGA CGACAGCCCC GCGCGTCCCC GTCCCCACCT CCGACCACCG 60
67
68 CCAGCGCTCC AGGCCCCGCG CTCCCCGCTC GCCGCCACCG CGCCCTCCGC TCCGCCCGCA 120
69
70 GTGCCAACC ATG ACC GCC GCC AGT ATG GGC CCC GTC CGC GTC GCC TTC 168
71 Met Thr Ala Ala Ser Met Gly Pro Val Arg Val Ala Phe
72 1 5 10
73
74 GTG GTC CTC CTC GCC CTC TGC AGC CGG CCG GCC GTC GGC CAG AAC TGC 216
75 Val Val Leu Leu Ala Leu Cys Ser Arg Pro Ala Val Gly Gln Asn Cys
76 15 20 25
77
78 AGC GGG CCG TGC CGG TGC CCG GAC GAG CCG GCG CCG CGC TGC CCG GCG 264
79 Ser Gly Pro Cys Arg Cys Pro Asp Glu Pro Ala Pro Arg Cys Pro Ala
80 30 35 40 45
81
82 GGC GTG AGC CTC GTG CTG GAC GGC TGC GGC TGC TGC CGC GTC TGC GCC 312
83 Gly Val Ser Leu Val Leu Asp Gly Cys Gly Cys Cys Arg Val Cys Ala
84 50 55 60
85
86 AAG CAG CTG GGC GAG CTG TGC ACC GAG CGC GAC CCC TGC GAC CCG CAC 360
87 Lys Gln Leu Gly Glu Leu Cys Thr Glu Arg Asp Pro Cys Asp Pro His
88 65 70 75
89
90 AAG GGC CTC TTC TGT GAC TTC GGC TCC CCG GCC AAC CGC AAG ATC GGC 408
91 Lys Gly Leu Phe Cys Asp Phe Gly Ser Pro Ala Asn Arg Lys Ile Gly
92 80 85 90
93
94 GTG TGC ACC GCC AAA GAT GGT GCT CCC TGC ATC TTC GGT GGT ACG GTG 456
95 Val Cys Thr Ala Lys Asp Gly Ala Pro Cys Ile Phe Gly Gly Thr Val
96 95 100 105
97
98 TAC CGC AGC GGA GAG TCC TTC CAG AGC AGC TGC AAG TAC CAG TGC ACG 504
99 Tyr Arg Ser Gly Glu Ser Phe Gln Ser Ser Cys Lys Tyr Gln Cys Thr
100 110 115 120 125
101
102 TGC CTG GAC GGG GCG GTG GGC TGC ATG CCC CTG TGC AGC ATG GAC GTT 552

INPUT SET: S866.raw

103	Cys	Leu	Asp	Gly	Ala	Val	Gly	Cys	Met	Pro	Leu	Cys	Ser	Met	Asp	Val	
104					130					135					140		
105																	
106	CGT	CTG	CCC	AGC	CCT	GAC	TGC	CCC	TTC	CCG	AGG	AGG	GTC	AAG	CTG	CCC	600
107	Arg	Leu	Pro	Ser	Pro	Asp	Cys	Pro	Phe	Pro	Arg	Arg	Val	Lys	Leu	Pro	
108				145					150					155			
109																	
110	GGG	AAA	TGC	TGC	GAG	GAG	TGG	GTG	TGT	GAC	GAG	CCC	AAG	GAC	CAA	ACC	648
111	Gly	Lys	Cys	Cys	Glu	Glu	Trp	Val	Cys	Asp	Glu	Pro	Lys	Asp	Gln	Thr	
112			160					165					170				
113																	
114	GTG	GTT	GGG	CCT	GCC	CTC	GCG	GCT	TAC	CGA	CTG	GAA	GAC	ACG	TTT	GGC	696
115	Val	Val	Gly	Pro	Ala	Leu	Ala	Ala	Tyr	Arg	Leu	Glu	Asp	Thr	Phe	Gly	
116		175					180					185					
117																	
118	CCA	GAC	CCA	ACT	ATG	ATT	AGA	GCC	AAC	TGC	CTG	GTC	CAG	ACC	ACA	GAG	744
119	Pro	Asp	Pro	Thr	Met	Ile	Arg	Ala	Asn	Cys	Leu	Val	Gln	Thr	Thr	Glu	
120	190					195					200					205	
121																	
122	TGG	AGC	GCC	TGT	TCC	AAG	ACC	TGT	GGG	ATG	GGC	ATC	TCC	ACC	CGG	GTT	792
123	Trp	Ser	Ala	Cys	Ser	Lys	Thr	Cys	Gly	Met	Gly	Ile	Ser	Thr	Arg	Val	
124					210					215					220		
125																	
126	ACC	AAT	GAC	AAC	GCC	TCC	TGC	AGG	CTA	GAG	AAG	CAG	AGC	CGC	CTG	TGC	840
127	Thr	Asn	Asp	Asn	Ala	Ser	Cys	Arg	Leu	Glu	Lys	Gln	Ser	Arg	Leu	Cys	
128				225				230						235			
129																	
130	ATG	GTC	AGG	CCT	TGC	GAA	GCT	GAC	CTG	GAA	GAG	AAC	ATT	AAG	AAG	GGC	888
131	Met	Val	Arg	Pro	Cys	Glu	Ala	Asp	Leu	Glu	Glu	Asn	Ile	Lys	Lys	Gly	
132			240					245					250				
133																	
134	AAA	AAG	TGC	ATC	CGT	ACT	CCC	AAA	ATC	TCC	AAG	CCT	ATC	AAG	TTT	GAG	936
135	Lys	Lys	Cys	Ile	Arg	Thr	Pro	Lys	Ile	Ser	Lys	Pro	Ile	Lys	Phe	Glu	
136		255					260					265					
137																	
138	CTT	TCT	GGC	TGC	ACC	AGC	ATG	AAG	ACA	TAC	CGA	GCT	AAA	TTC	TGT	GGA	984
139	Leu	Ser	Gly	Cys	Thr	Ser	Met	Lys	Thr	Tyr	Arg	Ala	Lys	Phe	Cys	Gly	
140	270					275					280					285	
141																	
142	GTA	TGT	ACC	GAC	GGC	CGA	TGC	TGC	ACC	CCC	CAC	AGA	ACC	ACC	ACC	CTG	1032

RAW SEQUENCE LISTING
PATENT APPLICATION US/08/167,628DATE: 02/16/94
TIME: 13:54:06

INPUT SET: S866.raw

```
154 GAC ATC TTT GAA TCG CTG TAC TAC AGG AAG ATG TAC GGA GAC ATG GCA T 1177
155 Asp Ile Phe Glu Ser Leu Tyr Tyr Arg Lys Met Tyr Gly Asp Met Ala
156 335 340 345
157
158 GAAGCCAGAG AGTGAGAGAC ATTAACATCAT TAGACTGGAA CTTGAACTGA TTCACATCTC 1237
159
160 ATTTTTCCTG AAAAATGATT TCAGTAGCAC AAGTTATTTA AATCTGTTTT TCTAACTGGG 1297
161
162 GGAAAAGATT CCCACCCAAT TCAAAACATT GTGCCATGTC AAACAAATAG TCTATCTTCC 1357
163
164 CCAGACACTG GTTTGAAGAA TGTTAAGACT TGACAGTGGA ACTACATTAG TACACAGCAC 1417
165
166 CAGAATGTAT ATTAAGGTGT GGCTTTAGGA GCAGTGGGAG GGTACCGGCC CGGTTAGTAT 1477
167
168 CATCAGATCG ACTCTTATAC GAGTAATATG CCTGCTATTT GAAGTGTAAT TGAGAAGGAA 1537
169
170 AATTTTAGCG TGCTCACTGA CCTGCCTGTA GCCCCAGTGA CAGCTAGGAT GTGCATTCTC 1597
171
172 CAGCCATCAA GAGACTGAGT CAAGTTGTTC CTTAAGTCAG AACAGCAGAC TCAGCTCTGA 1657
173
174 CATTCTGATT CGAATGACAC TGTTCAAGAA TCGGAATCCT GTCGATTAGA CTGGACAGCT 1717
175
176 TGTGGCAAGT GAATTTGCCT GTAACAAGCC AGATTTTTTA AAATTTATAT TGTAATATT 1777
177
178 GTGTGTGTGT GTGTGTGTGT ATATATATAT ATATATGTAC AGTTATCTAA GTTAATTTAA 1837
179
180 AGTTGTTTGT GCCTTTTAT TTTTGTTTTT AATGCTTTGA TATTTCAATG TTAGCCTCAA 1897
181
182 TTTCTGAACA CCATAGGTAG AATGTAAAGC TTGTCTGATC GTTCAAAGCA TGAAATGGAT 1957
183
184 ACTTATATGG AAATCTGCT CAGATAGAAT GACAGTCCGT CAAAACAGAT TGTTTGCAAA 2017
185
186 GGGGAGGCAT CAGTGTCTTG GCAGGCTGAT TTCTAGGTAG GAAATGTGGT AGCTCACG 2075
187
188
```

(2) INFORMATION FOR SEQ ID NO:2:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 349 amino acids

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:2:

```
200 Met Thr Ala Ala Ser Met Gly Pro Val Arg Val Ala Phe Val Val Leu
201 1 5 10 15
202
203 Leu Ala Leu Cys Ser Arg Pro Ala Val Gly Gln Asn Cys Ser Gly Pro
204 20 25 30
```

RAW SEQUENCE LISTING PATENT APPLICATION US/08/167,628

DATE: 02/16/94
TIME: 13:54:20

INPUT SET: S866.raw

```

205
206 Cys Arg Cys Pro Asp Glu Pro Ala Pro Arg Cys Pro Ala Gly Val Ser
207      35                        40                        45
208
209 Leu Val Leu Asp Gly Cys Gly Cys Cys Arg Val Cys Ala Lys Gln Leu
210      50                        55                        60
211
212 Gly Glu Leu Cys Thr Glu Arg Asp Pro Cys Asp Pro His Lys Gly Leu
213      65                        70                        75                        80
214
215 Phe Cys Asp Phe Gly Ser Pro Ala Asn Arg Lys Ile Gly Val Cys Thr
216      85                        90                        95
217
218 Ala Lys Asp Gly Ala Pro Cys Ile Phe Gly Gly Thr Val Tyr Arg Ser
219      100                       105                       110
220
221 Gly Glu Ser Phe Gln Ser Ser Cys Lys Tyr Gln Cys Thr Cys Leu Asp
222      115                       120                       125
223
224 Gly Ala Val Gly Cys Met Pro Leu Cys Ser Met Asp Val Arg Leu Pro
225      130                       135                       140
226
227 Ser Pro Asp Cys Pro Phe Pro Arg Arg Val Lys Leu Pro Gly Lys Cys
228      145                       150                       155                       160
229
230 Cys Glu Glu Trp Val Cys Asp Glu Pro Lys Asp Gln Thr Val Val Gly
231      165                       170                       175
232
233 Pro Ala Leu Ala Ala Tyr Arg Leu Glu Asp Thr Phe Gly Pro Asp Pro
234      180                       185                       190
235
236 Thr Met Ile Arg Ala Asn Cys Leu Val Gln Thr Thr Glu Trp Ser Ala
237      195                       200                       205
238
239 Cys Ser Lys Thr Cys Gly Met Gly Ile Ser Thr Arg Val Thr Asn Asp
240      210                       215                       220
241
242 Asn Ala Ser Cys Arg Leu Glu Lys Gln Ser Arg Leu Cys Met Val Arg
243      225                       230                       235                       240
244
245 Pro Cys Glu Ala Asp Leu Glu Glu Asn Ile Lys Lys Gly Lys Lys Cys
246      245                       250                       255
247
248 Ile Arg Thr Pro Lys Ile Ser Lys Pro Ile Lys Phe Glu Leu Ser Gly
249      260                       265                       270
250
251 Cys Thr Ser Met Lys Thr Tyr Arg Ala Lys Phe Cys Gly Val Cys Thr
252      275                       280                       285
253
254 Asp Gly Arg Cys Cys Thr Pro His Arg Thr Thr Thr Leu Pro Val Glu
255      290                       295                       300

```

RAW SEQUENCE LISTING
PATENT APPLICATION US/08/167,628DATE: 02/16/94
TIME: 13:54:35

INPUT SET: S866.raw

256
257 Phe Lys Cys Pro Asp Gly Glu Val Met Lys Lys Asn Met Met Phe Ile
258 305 310 315 320
259
260 Lys Thr Cys Ala Cys His Tyr Asn Cys Pro Gly Asp Asn Asp Ile Phe
261 325 330 335
262
263 Glu Ser Leu Tyr Tyr Arg Lys Met Tyr Gly Asp Met Ala
264 340 345
265

PAGE: 1

SEQUENCE VERIFICATION REPORT
PATENT APPLICATION US/08/167,628

DATE: 02/16/94
TIME: 13:54:37

INPUT SET: S866.raw

Line

Error

Original Text

PAGE: 1

SEQUENCE MISSING ITEM REPORT
PATENT APPLICATION US/08/167,628

DATE: 02/16/94
TIME: 13:54:38

INPUT SET: S866.raw

< < THERE ARE NO ITEMS MISSING > >

PAGE: 1

SEQUENCE CORRECTION REPORT
PATENT APPLICATION US/08/167,628

DATE: 02/16/94
TIME: 13:54:39

INPUT SET: S866.raw

Line	Original Text	Corrected Text
------	---------------	----------------